AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. **(Previously Presented)** An optical attenuator comprising:

at least one polarizing element having an optical polarization axis, wherein the polarizing element transmits a portion of an incident light signal proportional to the angular difference between an optical polarization axis of the incident light signal and that of the polarizing element; and

a variable faraday rotator including:

a semi-transparent material, wherein the semi-transparent material has a substantially cylindrical shape having a central axis;

a magnetic material for applying a magnetic force to a light signal that is passed through the semi-transparent material, wherein the magnetic material is wrapped around an outer perimeter of the semi-transparent material; and

a conductive wire disposed around at least a portion of the semi-transparent material and configured to induce a magnetic field on the magnetic material when a current is passed through the conductive wire, wherein the conductive wire is wrapped around an outer perimeter of the magnetic material.

2. **(Original)** The optical attenuator of claim 1, wherein the polarizing element comprises a polarizer having a linear optical polarity.

3. **(Original)** The optical attenuator of claim 1, wherein the semi-transparent material comprises a garnet.

4. **(Original)** The optical attenuator of claim 1, wherein the magnetic material comprises a hard ferromagnetic material.

5. **(Original)** The optical attenuator of claim 1, wherein the semi-transparent material is at least partially enclosed in the magnetic material.

6. **(Original)** The optical attenuator of claim 1, wherein the conductive wire is wrapped around the magnetic material.

7. **(Previously Presented)** A laser package comprising:

a laser light source;

a first polarizing element having an optical polarization axis and in optical communication with the laser light source, wherein the first polarizing element transmits a portion of an incident light signal proportional to the angular difference between an optical polarization axis of the incident light signal and that of the first polarizing element;

a variable faraday rotator in optical communication with the first polarizing element and including:

a semi-transparent material, wherein the semi-transparent material has a substantially cylindrical shape having a central axis;

a magnetic material configured to apply a magnetic force to a light signal that is passed through the semi-transparent material, wherein the magnetic material is wrapped around an outer perimeter of the semi-transparent material; and

a conductive wire disposed around at least a portion of the semi-transparent material and configured to induce a magnetic field on the magnetic material when a current is passed through the conductive wire, wherein the conductive wire is wrapped around an outer perimeter of the magnetic material; and

a second polarizing element having an optical polarization axis and in optical communication with the variable faraday rotator, wherein the second polarizing element transmits a portion of an incident light signal proportional to the angular difference

between an optical polarization axis of the incident light signal and that of the second polarizing element.

8. **(Original)** The laser package of claim 7, wherein the laser light source comprises a semiconductor laser or a gas laser.

9. **(Original)** The laser package of claim 7, wherein the laser light source comprises a distributed feedback laser.

10. **(Original)** The laser package of claim 7, wherein the polarizing elements each comprise a polarizer having a linear optical polarity.

11. **(Original)** The laser package of claim 7, wherein the semi-transparent material comprises a garnet.

12. **(Original)** The laser package of claim 7, wherein the magnetic material comprises a hard ferromagnetic material.

13. **(Original)** The laser package of claim 7, wherein the semi-transparent material is at least partially enclosed in the magnetic material.

14. **(Original)** The laser package of claim 7, wherein the conductive wire is wrapped around the magnetic material.

15. **(Original)** An optical transceiver package comprising the laser package of claim 7.

16. **(Previously Presented)** A laser package comprising:

a laser light source;

a first polarizing element having an optical polarization axis and in optical communication with the laser light source, wherein the first polarizing element transmits a portion of an incident light signal proportional to the angular difference between an optical polarization axis of the incident light signal and that of the first polarizing element;

a faraday rotator in optical communication with the first polarizing element and including:

a semi-transparent material; and

a magnetic material at least partially surrounding the semi-transparent material and configured to apply a magnetic force to a light signal that is passed through the semi-transparent material;

a second polarizing element having an optical polarization axis and in optical communication with the faraday rotator, wherein the second polarizing element transmits a portion of an incident light signal proportional to the angular difference between an optical polarization axis of the incident light signal and that of the second polarizing element;

a variable faraday rotator in optical communication with the second polarizing element and including:

a semi-transparent material, wherein the semi-transparent material has a substantially cylindrical shape having a central axis;

a magnetic material configured to apply a magnetic force to a light signal that is passed through the semi-transparent material, wherein the magnetic material is wrapped around an outer perimeter of the semi-transparent material; and

a conductive wire disposed around at least a portion of the semi-transparent material and configured to induce a magnetic field on the magnetic material when a current is passed through the conductive wire, wherein the conductive wire is wrapped around an outer perimeter of the magnetic material; and

a third polarizing element having an optical polarization axis and in optical communication with the variable faraday rotator, wherein the third polarizing element transmits a portion of an incident light signal proportional to the angular difference between an optical polarization axis of the incident light signal and that of the third polarizing element.

17. **(Original)** The laser package of claim 16, wherein the laser light source comprises a semiconductor laser or a gas laser.

18. **(Original)** The laser package of claim 16, wherein the laser light source comprises a distributed feedback laser.

19. **(Original)** The laser package of claim 16, wherein the polarizing elements each comprise a polarizer having a linear optical polarity.

20. **(Original)** The laser package of claim 16, wherein the semi-transparent materials comprise garnet.

21. **(Original)** The laser package of claim 16, wherein the magnetic material of the faraday rotator comprises a permanent magnet or a premagnetized hard ferromagnetic material.

22. **(Original)** The laser package of claim 16, wherein the magnetic material of the variable faraday rotator comprises a hard ferromagnetic material.

23. **(Original)** An optical transceiver package comprising the laser package of claim 16.

24. **(Previously Presented)** A laser package comprising:

a laser light source;

a first polarizing element having an optical polarization axis and in optical communication with the laser light source, wherein the first polarizing element transmits a portion of an incident light signal proportional to the angular difference between an optical polarization axis of the incident light signal and that of the first polarizing element;

a faraday rotator in optical communication with the first polarizing element and including:

a semi-transparent material; and

a magnetic material at least partially surrounding the semi-transparent material and configured to apply a magnetic force to a light signal that is passed through the semi-transparent material;

a variable faraday rotator in optical communication with the faraday rotator and including:

a semi-transparent material, wherein the semi-transparent material has a substantially cylindrical shape having a central axis;

a magnetic material configured to apply a magnetic force to a light signal that is passed through the semi-transparent material, wherein the magnetic material is wrapped around an outer perimeter of the semi-transparent material; and

a conductive wire disposed around at least a portion of the semi-transparent material and configured to induce a magnetic field on the magnetic

material when a current is passed through the conductive wire, wherein the conductive wire is wrapped around an outer perimeter of the magnetic material; and

a second polarizing element having an optical polarization axis and in optical communication with the variable faraday rotator, wherein the second polarizing element transmits a portion of an incident light signal proportional to the angular difference between an optical polarization axis of the incident light signal and that of the second polarizing element.

25. **(Original)** The laser package of claim 24, wherein the laser light source comprises a semiconductor laser or a gas laser.

26. **(Original)** The laser package of claim 24, wherein the laser light source comprises a distributed feedback laser.

27. **(Original)** The laser package of claim 24, wherein the polarizing elements each comprise a polarizer having a linear optical polarity.

28. **(Original)** The laser package of claim 24, wherein the semi-transparent materials comprise garnet.

29. **(Original)** The laser package of claim 24, wherein the magnetic material of the faraday rotator comprises a permanent magnet or a premagnetized hard ferromagnetic material.

30. **(Original)** The laser package of claim 24, wherein the magnetic material of the variable faraday rotator comprises a hard ferromagnetic material.

31. **(Original)** An optical transceiver package comprising the laser package of claim 24.

32. **(Canceled)**

33. **(Canceled)**

34. **(Canceled)**

35. **(Canceled)**

36. **(Canceled)**